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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,922	11/08/2000	Christopher R. Dance	D/99482	9612

7590

04/07/2004

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EXAMINER

SELBY, GEVELL V

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,922

Applicant(s)

DANCE, CHRISTOPHER R.

Examiner

Gevell Selby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/6/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claims 6 and 18 are objected to because of the following informalities:

Claim 6 is missing a period at the end of the sentence.

The first set of options for claim 18 should be denoted as “a” and “b” not “a” and “a”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-5, 10, 12, 14, 17, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagasaki et al., US 6,300,933.**

In regard to claim 1, Nagasaki et al., US 6,300,933, discloses a camera comprising:

a) a display device (see figure 1, element 106) for producing a visual display;

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b) an image generator (CPU; see figure 1, element 107) for generating a first image to be displayed by the display device, the first image including at least a portion of a stored image (see column 2, lines 63-67); and

c) a motion detector for detecting motion of the camera (see figure 1, element 102);

wherein the image generator is responsive to the motion detector so as to control the first image based on detected motion of the camera (see column 4, lines 36-50).

In regard to claim 2, Nagasaki et al., US 6,300,933, a camera according to claim 1, wherein the image generator is operable to generate a selection scene including at least a portion of the stored image (see column 4, lines 50-54).

In regard to claim 3, Nagasaki et al., US 6,300,933, a camera according to claim 1, wherein the image generator is operable to pan the first image relative to the stored image in response to detected motion of the camera (see column 4, lines 39-45).

In regard to claim 4, Nagasaki et al., US 6,300,933, a camera according to claim 3, wherein the detected motion for panning is movement of the camera in a plane generally parallel to said display device (see column 4, lines 40-54: Scrolling is performed based on the tilting of the device, which is a movement parallel to the display.).

In regard to claim 5, Nagasaki et al., US 6,300,933, a camera according to claim 3, wherein the detected motion for panning is tilting of the camera to change the attitude thereof (see column 4, lines 40-54).

In regard to claim 10, Nagasaki et al., US 6,300,933, a camera according to claim 2, wherein the image generator is operable to control selection of a said stored image within said selection scene by detected motion of the camera (see column 4, lines 40-54).

In regard to claim 12, Nagasaki et al., US 6,300,933, discloses a camera according to claim 1, wherein the motion detector comprises at least one accelerometer (see figure 1, element 101).

In regard to claim 14, Nagasaki et al., US 6,300,933, discloses a camera according to claim 1, wherein the motion detector comprises at least one attitude sensor.

In regard to claim 17, Nagasaki et al., US 6,300,933, discloses a camera having a display for displaying a stored image (see figure 1, element 106), and means for controlling at least one of:

- a) the display of the stored image (see column 4, lines 45-54); or
- b) the selection of one of a plurality of stored images from a displayed selection scene image;

wherein the control means is at least partly in responsive to detected motion of the camera to perform said control (see column 4, lines 40-54).

In regard to claim 18, Nagasaki et al., US 6,300,933, discloses, in an electronic camera, a method of controlling the display of at least one of:

- a) a stored image (see column 4, lines 40-54); or
- b) a selection scene image of a plurality of selectable stored images;

wherein the method comprises:

- a) detecting motion of the camera (see column 3, lines 40-48); and

b) controlling the display of said image at least partly in response to detected motion of the camera (see column 4, lines 40-54).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaki et al., US 6,300,933 in view of Hedberg, US 6,411,275.**

In regard to claim 6, Nagasaki et al., US 6,300,933, discloses camera according to claim 1, but lacks wherein that the image generator is operable to zoom the first image relative to the stored image.

Hedberg, US 6,411,275, discloses a method for displaying a complete or a determined part of a screen image wherein, when the display device is moved essentially in the plane of the display, different parts of a complete image are shown on the display screen and when the display device is moved essentially in the direction perpendicular to the plane of the display, the magnification of the screen image is changed (see column 2, lines 45-55).

It would have been obvious to a person skilled in the art at the time of invention to have been motivated to modify Nagasaki et al., US 6,300,933 in view of Hedberg, US

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6,411,275, to have the image generator is operable to zoom the first image relative to the stored image in order to display full documents in a proper and readable way as taught by Hedberg (see column 1, lines 51-57).

In regard to claim 7, Nagasaki et al., US 6,300,933 in view of Hedberg, US 6,411,275, as described in regard to claim 6 above, discloses a camera according to claim 6, wherein the image generator is operable to control the zoom factor of the first image relative to the stored image in response to detected motion of the camera (see Hedberg: column 4, lines 4-12).

It is implied in the Hedberg reference that the controller of the display controls the zoom factor relative to the motion of the camera because moving the camera zooms in or all the way out to view entire document which would require changing the zoom factor.

In regard to claim 8, Nagasaki et al., US 6,300,933 in view of Hedberg, US 6,411,275, as described in regard to claim 6 above, discloses a camera according to claim 7, wherein the detected motion for zoom control is movement of the camera in a direction generally perpendicular to a plane of the display device (see Hedberg: column 2, lines 52-54).

In regard to claim 9, Nagasaki et al., US 6,300,933 in view of Hedberg, US 6,411,275, as described in regard to claim 6 above, discloses a camera according to claim 6, wherein the image generator and the motion detector are operable to control a panning speed for panning the first image relative to the stored image, in response to a zoom factor of the first image (see Hedberg: column 3, line 62 to column 4, line 12).

It is implied that the panning speed is adjusted in response to the zoom factor because a document zoomed all the way out would have to be panned at a slower speed than one zoomed all the way in order for both to be scrolled at a pace that is readable.

6. Claims 11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaki et al., US 6,300,933 in view of Verplaetse, 1996.

In regard to claim 11, Nagasaki et al., US 6,300,933, discloses a camera according to claim 1, but does not disclose that it further comprises a filter for filtering jitter from the detected motion.

The Verplaetse reference teaches that an extended Kalman filter can be used in a state-estimation scheme to implement camera motion analysis with a joint inertial-optical motion estimator (see pg. 642, column 2, paragraph 1). The reference further teaches the inertial sensors used for tracking a video camera should thus have optimal frequency response in the 3 to 8 Hz range.

It would have been obvious to a person skilled in the art at the time of invention to have been motivated to modify Nagasaki et al., US 6,300,933 in view of Verplaetse, 1996, to have a filter for cutting off high frequency noise to remain to the optical frequency range tracking a video camera as taught by Verplaetse and therefore, cutting out jitter.

In regard to claim 13, Nagasaki et al., US 6,300,933 in view of Verplaetse, 1996, as described in regard to claim 11 above, discloses a camera according to claim 12, further comprising a filter for compensating the output from the accelerometer or accelerometers for gravity (see pg. 642, column 2, paragraph 1).

In regard to claim 15, Nagasaki et al., US 6,300,933, discloses a camera according to claim 1, but does not disclose that the motion detector comprises an optical sensor for detecting motion by correlation with a detected optical scene.

The Verplaetse reference teaches of uses optical gyros that operate using the inertial properties of light for tracking the motion of devices like the camera in the reference (see page 647, paragraph 1).

It would have been obvious to a person skilled in the art at the time of invention to have been motivated to modify Nagasaki et al., US 6,300,933 in view of Verplaetse, 1996, to use the optical gyros as an alternative to the acceleration sensor in order to track the motion of the camera as taught by Verplaetse.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaki et al., US 6,300,933 in view of Kobayashi et al., US 5,748,228.

In regard to claim 16, Nagasaki et al., US 6,300,933, discloses a camera according to claim 1, but does not disclose the camera is a document imaging camera.

Kobayashi et al., US 5,748,228 discloses a document imaging camera with a display for reading imaged documents or enlarged portions of the documents to provide a inputting outputting device that is capable of being used easily and which has excellent portability.

It would have been obvious to a person skilled in the art at the time of invention to modify Nagasaki et al., US 6,300,933 in view of Kobayashi et al., US 5,748,228, to have a document imaging camera in order to capture and display documents easily while maintaining portability as taught by Kobayashi.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following art discloses document image display devices:

US 5,714,972,

US 5,602,566,

US 4,926,269,

The following art discloses cameras with displays and motion sensors:

US 6,476,861,

US 5,585,875,

US 5,905,525

US 5,943,603.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Vu Le can be reached on 703-308-6613. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs


J. U. LE
PRIMARY EXAMINER